AMENDMENTS TO THE CLAIMS

1. (Original) An equipment for transforming plants which comprises:

a microporous body having a surface on which a plant seed is germinated and grown into a plant body, wherein the plant seed is germinated and grown by absorbing an aqueous nutrition which is retained in communicating pores in the microporous body from the surface of the microporous body; and

a carrier solution containing a gene with which the plant body is transformed,

wherein the grown plant body is transformed by immersing it in the carrier solution according to an in planta method.

2. (Original) The equipment for transforming plants according to claim 1, wherein the in plant method is a vacuum infiltration transformation.

3. (Original) A system for transforming plants which comprises:

a plurality of microporous bodies, each microporous body having a surface on which a plant seed is germinated and grown into a plant body; and

a holding means for removably holding the plurality of microporous bodies,

wherein each plant seed is germinated and grown by absorbing an aqueous nutrition which is retained in communicating pores in the microporous body from the surface of the microporous body,

wherein a plurality of plant bodies grown on the surfaces of the microporous bodies held by the holding means are transformed by immersing them in a carrier solution approximately at the same time according to an in planta method.

4. (Original) The system for transforming plants according to claim 3, wherein the in planta method is a vacuum infiltration transformation.

5. (Currently Amended) The system for transforming plants according to claim 3~~ or 4~~, wherein the aqueous nutrition is stored in a holding means with contacting with the microporous bodies.

6. (Currently Amended) The system for transforming plants according to claim 3~~ or 4~~, which further comprises a storage tank for storing the aqueous nutrition and an aqueous nutrition-supplying means for connecting the microporous body with the aqueous nutrition in the storage tank, wherein the aqueous nutrition in the storage tank is supplied to the microporous body through the aqueous nutrition-supplying means.

7. (Currently Amended) The system for transforming plants according to ~~any one of claims 3 to 6~~ claim 3, wherein the microporous body has a cylindrical shape, and the plant seed is germinated and grown on an inner surface of the microporous body.

8. (Currently Amended) The system for transforming plants according to ~~any one of claims 3 to 7~~ claim 3, wherein the plants are selected from the group consisting of a useful tree such as bishop's flower (Ammi majus), onion (Allium cepa), garlic (Allium sativum), celery (Apium graveolens), asparagus (Asparagus officinalis), sugar beet (Beta vulgaris), cauliflower (Brassica oleracea var. botrytis), brusseles sprout (Brassica oleracea var. gemmifera), cabbage (Brassica oleracea var. capitata), rape (Brassica napus), caraway (Carum carvi), chrysanthemum (Chrysanthemum morifolium), spotted hemlock (Conium maculatum), coptis Rhizome (Coptis japonica), chicory (Cichorium intybus), summer squash (Curcurbita pepo), thorn apple (Datura meteloides), carrot (Daucus carota), carnation (Dianthus caryophyllus), buckwheat (Fagopyrum esculentum), fennel (Foeniculum vulgare), strawberry (Fragaria chiloensis), soybean (Glycine max), hyacinth (Hyacinthus orientalis), sweet potato (Ipomoea batatas), lettuce (Lactuca sativa), birds-foot trefoil (Lotus corniculatus, Lotus japonicus), tomato (Lycopersicon esculentum), alfalfa (Medicago sativa), tobacco (Nicotiana tabacum), rice (Oryza sativa), parsley (Petroselinum hortense), pea (Pisum sativum), rose (Rosa hybrida), egg plant (Solanum melongena), potato (Solanum tuberosum), wheat (Triticum aestivum), maize (Zea mays), sugar beat Beta vulgaris, cotton Gossypium indicum, rape Brassica campestris, flax Linum usitatissimum, sugarcane Saccharum officinarum, papaya Carica papaya, Squash Cucurbita moschata, cucumber Cucumis sativus, watermelon Citrullus vulgaris, melon Cucumis melo, Winter Squash Cucurbita maxima and the like; a

foliage plant such as snapdragon (Antirrhinum majus), mouse-ear cress (Arabidopsis thaliana), croton (Codiaeum variegatum), cyclamen (Cyclamen persicum), poinsettia (Euphorbia pulcherrima), barberton daisy (Gerbera jamesonii), sunflower (Helianthus annuus), fish geranium (Pelargonium hortorum), petunia (Petunia hybrida), African violet (Saintpaulia ionatha), dandelion (Taraxacum officinale), torenia (Torenia fournieri), Dutch clover (Trifolium repens), cymbidium (Cymbidium) and the like; a woody plant such as beat tree (Azadirachta indica), orange (Citrus), common coffee (Coffea arabica), ribbon gum (Eucalyptus), para rubber tree (Hevea brasiliensis), holly (Ilex aquifolium), trifoliate orange (Poncirus trifoliata), almond (Prunus amygdalus), carolina poplar (Populus canadensis), oriental arborvitae (Biota orientalis), Japanese ceder (Cryptomeria japonica), Norway spruce (Picea abies), pine genus (Pinus), grapevine (Vitis vinifera), apple (Malus pumila), apricot (Prunus armeniaca), persimmon (Diospyros kaki), fig (Ficus carica), chestnut (Castanea crenata), Lombardy poplar□Populus nigra, Eleuthero Acanthopanax senticosus and the like.

9. (Original) A method for transforming plants which comprises steps of:

germinating and growing a plant seed into a plant body on a surface of a microporous body, wherein the plant seed is grown by absorbing an aqueous nutrition retained in communicating pores in the microporous body from the surface of the microporous body; and

and

transforming the plant body grown on the surface of the microporous body by immersing it in a carrier solution containing a gene with which the plant body is transformed according to an in planta method.

10. (Original) The method for transforming plants according to claim 9, wherein the in planta method is a vacuum infiltration transformation.

11. (Original) A method for transforming plants which comprises steps of:

removably holding a plurality of microporous bodies in a holding means;

seeding a plant seed on each surface of the microporous bodies, wherein the plant seed is germinated and grown into a plant body by absorbing an aqueous nutrition retained in communicating pores in the microporous body from the surface of the microporous body; and

transforming a plurality of plant bodies grown on the surfaces of a plurality of the microporous bodies held in the holding means by immersing them in a carrier solution containing a gene with which the plant body is transformed approximately at the same time according to an in planta method.

12. (Original) The method for transforming plants according to claim 11, wherein the in planta method is a vacuum infiltration

transformation.

13. (Currently Amended) The method for transforming plants according to claim 11~~ or 12~~, which further comprises a step of selecting only microporous bodies having the plant bodies which have grown to a stage suitable for transformation to hold them in the holding means before immersing the plant bodies in the carrier solution, and subjecting the plant bodies to transformation.

14. (Original) A method for selecting plants harboring a heterogeneous gene from a parent transformed plant body, which comprises steps of:

(i) immersing a portion of a microporous body in an aqueous nutrition containing one or more of the first drug for selection;

(ii) seeding a plant seed obtained from a transformed plant body on a surface of the microporous body, wherein the transformed plant body has been transformed with at least one heterogeneous gene comprising a resistant gene for the first drug for selection and wherein the plant seed harboring the heterogeneous gene from a parent transformed plant body can be germinated or grown by absorbing an aqueous nutrition containing the first drug for selection retained in communicating pores in the microporous body from the surface of the microporous body, but the plant seed harboring no heterogeneous gene from a parent transformed plant body can not be germinated or grown; and

(iii) obtaining the plant body which can be germinated or

grown or,

further, repeating above steps (i) to (iii) once or more times, using the plant seed obtained from the plant body and one or more of the drug for selection which is the same as or different from the first drug for selection in place thereof, wherein the transformed plant body also comprises a resistant gene for the drug for selection.

15. (Original) A method for selecting plants harboring a heterogeneous gene from a parent transformed plant body which comprises conducting, at least one time, steps of:

seeding a plant seed obtained in claim 14 harboring the resistant gene for the first drug for selection on the surface of the microporous body, wherein the plant seed is germinated and grown into a plant body by absorbing one or more of a drug for selection different from the first drug for selection or the aqueous nutrition retained in communicating pores in the microporous body from the surface of the microporous body; and

confirming whether the grown plant body harbors the resistant gene for the drug for selection different from the first drug for selection, or whether the grown plant body expresses a target heterogeneous gene as phenotype thereof.

16. (New) The system for transforming plants according to claim 4, wherein the aqueous nutrition is stored in a holding means with contacting with the microporous bodies.

17. (New) The system for transforming plants according to claim

4, which further comprises a storage tank for storing the aqueous nutrition and an aqueous nutrition-supplying means for connecting the microporous body with the aqueous nutrition in the storage tank, wherein the aqueous nutrition in the storage tank is supplied to the microporous body through the aqueous nutrition-supplying means.

18. (New) The system for transforming plants according to claim 4, wherein the microporous body has a cylindrical shape, and the plant seed is germinated and grown on an inner surface of the microporous body.

19. (New) The system for transforming plants according to claim 5, wherein the microporous body has a cylindrical shape, and the plant seed is germinated and grown on an inner surface of the microporous body.

20. (New) The system for transforming plants according to claim 6, wherein the microporous body has a cylindrical shape, and the plant seed is germinated and grown on an inner surface of the microporous body.